

APPENDIX B
RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVES (OE) SITES

Site Name _____	Rater's Name _____
Site Location _____	Phone Number _____
DERP Project # _____	Organization _____
Date Completed _____	Score _____

OE RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882C and AR 385-10. The Risk Assessment Code (RAC) score will be used by the U.S. Army Engineering and Support Center, Huntsville (USAESCH), Ordnance and Explosives Team (USAESCH-OE) to prioritize the response action(s) at Formerly Used Defense Sites (FUDS). The risk assessment should be based on the best available information resulting from record searches, reports of Explosive Ordnance Disposal (EOD) Detachments actions, field observations, interviews, and measurements. This information is used to assess the risk involved based on the potential OE hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability. Personnel involved in visits to potential OE sites should view the USAESCH-OE videotape entitled "A Life Threatening Encounter: OEW".

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of unexploded ordnance.

TYPE OF ORDNANCE: (Circle all that apply)	VALUE
A. Conventional ordnance and ammunition:	
Medium/large caliber (20mm and larger)	10
Bombs, explosive	10
Grenades, hand or rifle, explosive	10
Landmine, explosive	10
Rockets, guided missile, explosive	10
Detonators, blasting caps, fuzes, boosters, bursters	6
Bombs, practice (w/spotting charges)	6
Grenades, practice (w/spotting charges)	4
Landmine, practice (w/spotting charges)	4
Small arms, complete round (.22 cal -.50 cal)	1
Small arms, expended	0
Practice ordnance (w/o spotting charges)	0
Conventional ordnance and ammunition (largest single value)	_____

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What evidence do you have regarding conventional unexploded ordnance? _____

B. Pyrotechnics (for munitions not described above):	VALUE
Munition (containers) containing White Phosphorus (WP) or other pyrophoric material (i.e., spontaneously flammable)	10
Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)	6
Flares, signals, simulators, screening smokes (other than WP)	4
Pyrotechnics (select the single largest value)	_____

What evidence do you have regarding pyrotechnics? _____

C. Bulk High Explosives (HE) (not an integral part of conventional ordnance; uncontainerized):	VALUE
Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10
Demolition charges	10
Secondary explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, HMX, HBX, Black Powder, etc.)	8
Military dynamite	6
Less sensitive explosives (Ammonium Nitrate, Explosive D, etc.)	3
High explosives (select the single largest value)	_____

What evidence do you have regarding bulk explosives? _____

D. Bulk propellants (not an integral part of rockets, guided missiles, or other conventional ordnance; uncontainerized):

VALUE

Solid or liquid propellants 6

Propellants _____

What evidence do you have regarding bulk propellants? _____

E. Chemical Warfare Materiel (CWM) and Radiological Weapons:

VALUE

Toxic chemical agents (choking, nerve, blood, blister) 25

War Gas Identification Sets 20

Radiological 15

Riot Control Agents (vomiting, tear) 5

Chemical and Radiological (select the single largest value) _____

What evidence do you have regarding chemical or radiological? _____

TOTAL HAZARD SEVERITY VALUE (Sum of value A through E (maximum of 61)

Apply this value to Table 1 to determine Hazard Severity Category

TABLE 1
HAZARD SEVERITY*

<u>DESCRIPTION</u>	<u>CATEGORY</u>	<u>HAZARD SEVERITY VALUE</u>
CATASTROPHIC	I	21 and/or greater
CRITICAL	II	10 to 20
MARGINAL	III	5 to 9
NEGLIGIBLE	IV	1 to 4
**NONE	V	0

*Apply Hazard Severity Category to Table 3

**If hazard severity value is 0, you do not need to complete Part II of this form. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

PART II. Hazard Probability. The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used Department of Defense (DOD) site.

AREA, EXTENT, ACCESSIBILITY OF OE HAZARD (Circle all that apply)

A. Locations of OE hazards:	VALUE
On the surface	5
Within tanks, pipes, vessels, or other confined areas	4
Inside walls, ceilings, or other building/structure	3
Subsurface	2

Location (select the single largest value) _____

What evidence do you have regarding the location of OE? _____

B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building, etc.) VALUE

Less than 1,250 feet	5
1,250 feet to 0.5 mile	4
0.5 mile to 1.0 mile	3
1.0 mile to 2.0 Miles	2
Over 2 miles	1

Distance (select the single largest value) _____

What are the nearest inhabited structures/buildings? _____

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary. VALUE

26 and over	5
16 to 25	4
11 to 15	3
6 to 10	2
1 to 5	1
0	0

Number of buildings (select the single largest value) _____

Narrative: _____

D. Types of Buildings (within a 2 mile radius) VALUE

Educational, child care, residential, hospitals hotels, commercial, shopping centers	5
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Industrial, warehouse, etc.	4
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Agricultural, forestry, etc.	3
Detention, correctional	2
No buildings	0
Types of buildings (select the single largest value)	_____
Describe the types of buildings: _____	

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance:	VALUE
No barrier nor security system	5
Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.	4
A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.	3
Security Guard, but no barrier	2
Isolated site	1
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the area; and, a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).	0
Accessibility (select the single largest value)	_____

Describe the site accessibility:_____

F. Site Dynamics. This deals with site conditions are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility. VALUE

Expected 5
None anticipated 0

Site Dynamics (select the single largest value) _____

Describe the site dynamics;_____

TOTAL HAZARD PROBABILITY VALUE (sum of largest values for A through F (maximum of 30) _____

Apply this value to Hazard Probability Table 2 to determine the Hazard Probability Level.

TABLE 2
HAZARD
PROBABILITY

<u>DESCRIPTION</u> <u>VALUE</u>	<u>LEVEL</u>	<u>HAZARD PROBABILITY</u>
FREQUENT	A	27 or greater
PROBABLE	B	21 to 26
OCCASIONAL	C	15 to 20
REMOTE	D	8 to 14
IMPROBABLE	E	less than 8

*Apply Hazard Probability Level to Table 3.

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Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table. Enter the results of the Hazard Probability and Hazard Severity values.

TABLE 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	1	1	2	3	4
CRITICAL II	1	2	3	4	5
MARGINABLE III	2	3	4	4	5
NEGLIGIBLE IV	3	4	4	5	5

RISK ASSESSMENT CODE
(RAC)

- RAC 1 Expedite INPR, recommending further action by USAESCH-Immediately call USAESCH-OE-S (comm 256-895-1582/1598).
- RAC 2 High priority on completion of INPR-Recommend further action by USAESCH.
- RAC 3 Complete INPR-Recommend further action by USAESCH.
- RAC 4 Complete INPR-Recommend further action by USAESCH.
- RAC 5 Usually indicates that No DOD Action Indicated (NDAI) is necessary, Submit NDAI and RAC to USAESCH.

PART IV. Narrative. Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made.
